return for sector i for period t, $\bar{r}_{it}$ is a benchmark return for sector i for period t, w_{it} is a weight for r_{it}, $\bar{w}_{it}$ is a weight for $\bar{r}_{it}$, i ranges from 1 to N, $r_{it} = r_{jt}$ for $i = j$, $\bar{r}_{it} = \bar{r}_{jt}$ for $i = j$, $w_{it} = w_{jt}$ for $i = j$, $\bar{w}_{it} = \bar{w}_{jt}$ for $i = j$, R_t is a portfolio return for period t, $\bar{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T}(1 + R_t)] - 1$$

and $\bar{R}$ is determined by

$$\bar{R} = [\prod_{t=1}^{T}(1 + \bar{R}_t)] - 1;$$

and determining the portfolio performance as

$$\frac{1+R}{1+\bar{R}} = \prod_{t=1}^{T}\prod_{i=1}^{N}(1 + I_{it}^{G,Vestek})(1 + S_{it}^{G,Vestek}).$$

REMARKS:

Claims 5-8 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite. In response, claims 5-8 are amended to include an explicit definition for each symbol used therein.

Applicant requests reconsideration and allowance of claims 5-8, as amended.

Respectfully submitted,

GIRARD & EQUITZ LLP

Dated: 6/13/03 By: Alfred A. Equitz

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APPENDIX

5. (Amended) A computer system, comprising:

a processor programmed to perform an arithmetic performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining coefficients $(A+\alpha_t)$, where A is a coefficient, the values α_t are defined as

$$\alpha_t = \left[\frac{R-\overline{R}-A\sum_{k=1}^{T}(R_k-\overline{R}_k)}{\sum_{k=1}^{T}(R_k-\overline{R}_k)^2}\right](R_t-\overline{R}_t),$$

where R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R_k is a portfolio return for period k, $\overline{R}_k$ is a benchmark return for period k, k varies from 1 to T, $R_k = R_t$ for $k=t$, $\overline{R}_k = \overline{R}_t$ for $k=t$, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)]-1,$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)]-1;$$

and determining the portfolio relative performance as

$$R-\overline{R} = \sum_{t=1}^{T}\sum_{i=1}^{N}(A+\alpha_t)(I_{it}^{A}+S_{it}^{A}),$$

where I_{it}^{A} is an issue selection for sector i and period t, [and] S_{it}^{A} is a sector selection for sector i and period t, and i ranges from 1 to N; and

a display device coupled to the processor for displaying a result of the arithmetic performance attribution computation.

6. (Twice amended) A computer system, comprising:

a processor programmed to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining attribution effects for issue selection $(1+I_{it}^{G,Vestek})$ given by

$$1 + I_{it}^{G,Vestek} = \left(\frac{1 + w_{it} r_{it}}{1 + w_{it} \bar{r}_{it}}\right) \Gamma_t$$

and determining attribution effects for sector selection $(1 + S_{it}^{G,Vestek})$ given by

$$1 + S_{it}^{G,Vestek} = \left(\frac{1 + w_{it} \bar{r}_{it}}{1 + \bar{w}_{it} \bar{r}_{it}}\right)\left(\frac{1 + \bar{w}_{it} \bar{R}_t}{1 + w_{it} \bar{R}_t}\right) \Gamma_t ,$$

where the values of Γ_t are,

$$\Gamma_t = \left[\left(\frac{1 + R_t}{1 + \bar{R}_t}\right) \prod_{j=1}^{N} \frac{(1 + \bar{w}_{jt} \bar{r}_{jt})(1 + w_{jt} \bar{R}_t)}{(1 + w_{jt} r_{jt})(1 + \bar{w}_{jt} \bar{R}_t)}\right]^{\frac{1}{2N}},$$

where r_{jt} is a portfolio return for sector j for period t, $\bar{r}_{jt}$ is a benchmark return for sector j for period t, w_{jt} is a weight for r_{jt}, $\bar{w}_{jt}$ is a weight for $\bar{r}_{jt}$, r_{it} is a portfolio return for sector i for period t, $\bar{r}_{it}$ is a benchmark return for sector i for period t, w_{it} is a weight for r_{it}, $\bar{w}_{it}$ is a weight for $\bar{r}_{it}$, i ranges from 1 to N, $r_{it} = r_{jt}$ for $i = j$, $\bar{r}_{it} = \bar{r}_{jt}$ for $i = j$, $w_{it} = w_{jt}$ for $i = j$, $\bar{w}_{it} = \bar{w}_{jt}$ for $i = j$, R_t is a portfolio return for period t, $\bar{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T} (1 + R_t)] - 1$$

and $\bar{R}$ is determined by

$$\bar{R} = [\prod_{t=1}^{T} (1 + \bar{R}_t)] - 1 ;$$

and determining the portfolio performance as

$$\frac{1 + R}{1 + \bar{R}} = \prod_{t=1}^{T} \prod_{i=1}^{N} (1 + I_{it}^{G,Vestek})(1 + S_{it}^{G,Vestek});$$

and

a display device coupled to the processor for displaying a result of the geometric performance attribution computation.

7. (Amended) A computer readable medium which stores code for programming a processor to perform an arithmetic performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t

varies from 1 to T, by determining coefficients $(A+\alpha_t)$, where A is a coefficient, the values α_t are defined as

$$\alpha_t = \left[\frac{R-\overline{R}-A\sum_{k=1}^{T}(R_k-\overline{R}_k)}{\sum_{k=1}^{T}(R_k-\overline{R}_k)^2}\right](R_t-\overline{R}_t),$$

where R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R_k is a portfolio return for period k, $\overline{R}_k$ is a benchmark return for period k, k varies from 1 to T, $R_k = R_t$ for $k=t$, $\overline{R}_k = \overline{R}_t$ for $k=t$, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)]-1,$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)]-1;$$

and determining the portfolio relative performance as

$$R-\overline{R} = \sum_{t=1}^{T}\sum_{i=1}^{N}(A+\alpha_t)(I_{it}^{A}+S_{it}^{A}),$$

where I_{it}^{A} is an issue selection for sector i and period t, [and] S_{it}^{A} is a sector selection for sector i and period t, and i ranges from 1 to N.

8. (Twice amended) A computer readable medium which stores code for programming a processor to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining attribution effects for issue selection $(1+I_{it}^{G,Vestek})$ given by

$$1+I_{it}^{G,Vestek} = \left(\frac{1+w_{it}r_{it}}{1+w_{it}\overline{r}_{it}}\right)\Gamma_t$$

and determining attribution effects for sector selection $(1+S_{it}^{G,Vestek})$ given by

$$1+S_{it}^{G,Vestek} = \left(\frac{1+w_{it}\overline{r}_{it}}{1+\overline{w}_{it}\overline{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t,$$

where the values of Γ_t are,

$$\Gamma_t = \left[\left(\frac{1+R_t}{1+\overline{R}_t} \right) \prod_{j=1}^{N} \frac{(1+\overline{w}_{jt}\overline{r}_{jt})(1+w_{jt}\overline{R}_t)}{(1+w_{jt}r_{jt})(1+\overline{w}_{jt}\overline{R}_t)} \right]^{\frac{1}{2N}},$$

where r_{jt} is a portfolio return for sector j for period t, $\overline{r}_{jt}$ is a benchmark return for sector j for period t, w_{jt} is a weight for r_{jt}, $\overline{w}_{jt}$ is a weight for $\overline{r}_{jt}$, r_{it} is a portfolio return for sector i for period t, $\overline{r}_{it}$ is a benchmark return for sector i for period t, w_{it} is a weight for r_{it}, $\overline{w}_{it}$ is a weight for $\overline{r}_{it}$, i ranges from 1 to N, $r_{it} = r_{jt}$ for $i = j$, $\overline{r}_{it} = \overline{r}_{jt}$ for $i = j$, $w_{it} = w_{jt}$ for $i = j$, $\overline{w}_{it} = \overline{w}_{jt}$ for $i = j$, R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)] - 1$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)] - 1;$$

and determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}} = \prod_{t=1}^{T}\prod_{i=1}^{N}(1+I_{it}^{G,Vestek})(1+S_{it}^{G,Vestek}).$$